

STORMWATER RUNOFF ANALYSIS
FOR
CEDAR RIDGE SUBDIVISION
COLEMAN ROAD
MIDDLETOWN, CT

PREPARED BY

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PROJECT NARRATIVE

The project proposes to create a partial subdivision of a 35 acre property to develop six front lots along Coleman Road. The property is zoned R-30, however due to the lack of sanitary sewer service the lots must conform to the R-45 lot size criteria. The lots along Coleman Road will be serviced by city water and on-site septic systems. The center half of the 35 acre parcel will remain undeveloped and will be deeded to the owner of the existing lot on Maple Shade Road. A conservation easement will be placed over the rear of the six proposed lots.

The watershed for these lots is divided between the Coleman Road storm drainage system and a wetland corridor running through the center of the larger parcel. The majority of the subdivision flows east to the wetland corridor. Both subwatersheds outlet directly to Long Hill Brook which borders the property on the north.

Watershed A, which runs to Coleman Road is fully developed and totals approximately 10.3 acres in size as compared to the 3.7 acres contributed by this subdivision. The increase in peak runoff rates for development of this watershed varies from 0.37 to 0.64 cfs for the 2-100 year events. This increase is quite small in comparison to pipe full flow capacities of the 18 inch pipes in the Coleman Road drainage system which range from 27 cfs near lot #6 to 35 cfs near Rt. 17.

Similarly, watershed B totals 56 acres as compared to the 11.4 acres contributed by this Subdivision. The resulting increase in peak runoff rates varies from 1.4 cfs to 2.6 cfs for the 2 through 100 year events. No detention is proposed to ensure that the runoff will pass to the brook before the bulk of the uphill watershed which must first pass thru a large pond and dam on the neighboring property, flows thru the subdivision property. Both watersheds discharge from this property directly to Long Hill Brook. Given that time for the runoff to reach the brook is short, detention is not recommended in that the small increase in runoff from this site will be completely absorbed by the large flow in the brook which will move downstream long before the bulk of the flow from the Long Hill Brook watershed passed this property. At the time when the site runoff enters Long Hill Brook, at that point any increase in flow will be immeasurable therefore having no impact on the brook or downstream watershed.

Roofwater detention/infiltration galleries are proposed for each lot to store and infiltrate the first 1 inch of roof runoff from each storm.

This analysis uses the TR-55 computer program by Intellisolve to determine the pre and post development runoff hydrographs. The "Hydrograph Summary Reports" show the changes in peak runoff rates attribute to this six lot subdivision.